SECRET

RD 103 TO 8

25X1

27 January 1959

DOC 68 REV DATE 1 APR 1980 BY 064540
ORIG COMP 056 OPI 56 TYPE 01
ORIG CLASS S PAGES 4 REV CLASS S
JUST 22 NEXT REV 2010 AUTH: HR 70-2

25X1

Dear

25X1

The attached specification incorporates the revisions as agreed upon at the joint conference held at on January 23, 1959.

25X1

The nature of this document prevents our forwarding a copy to but a copy for is attached and it is requested that you forward his copy in accordance with your security procedure.

25X1

25X1

Very truly yours,

25X1

25X1

Forwarded to 2-2-59

WCB:tl
Enclosures
Set of Specifications
Copy of Specifications for

25X1

This Document contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title 18, U. S. C., Sections 793 and 794, the Transmission or Revelation of which in any manner to an unauthorized person is prohibited by law.

SECRET

25X1

25X1

Signal:

1. ALERT LINE. The Alert line will provide the Data Collector with a negative-going 14 volt step (0 to -14 volt unregulated, @ 15 milliamperes) for the purpose of initiating the Data Collector Turn-On function. The -14 volt DC level shift will occur approximately 3 to 5 seconds prior to the first clock pulse of each readout operation and terminate at the end of the transmit sequence. During the time when the -14 volt signal is not present, the Alert line will be grounded.

2. CLOCK or READOUT LINE. The Readout line will provide the Data Collector with clock pulses having the following specifications: Amplitude, 5 volts (0 to +5) minimum; duration, 175 ± 25 microseconds; repetition rate, 200 pps. The Digital Converter will provide these clock pulses continuously during the time interval which commences approximately 3 to 5 seconds following the Alert signal, and terminates upon receipt of a stop pulse from the Collector.

3. INFORMATION LINE. The Information line will provide the Digital Converter with the information stored in the Collector data memory unit. The first bit of information will be emitted by the Collector upon receipt of the first readout pulse from the Digital Converter and the time delay therein will be a maximum of 10 microseconds. The above measurement is to be made between the leading edge of the readout pulse and the leading edge of the information pulse at the half-power points. The information pulses will have the following parameters: Amplitude, 5 volts (0 to +5) minimum; duration, 100 ± 25 microseconds; rise time, 8 microseconds maximum. The Collector will gate the Information line off until such time that the Collector is reset and ready to supply data. It is essential that the information line is free of any spurious spikes, etc. which might accidentally trigger the message circuitry in the Digital Converter.

25X1

4. STOP PULSE LINE. The Stop Pulse line will provide the Digital Converter with a single pulse which is time coincident with the last information bit received from the Collector. This pulse will consist of a differentiated spike with the following parameters: Amplitude, 5 volts (0 to +5) minimum; rise time, 2 microseconds maximum; decay time, 3 milliseconds (approximately). It is essential that this line be free of spurious spikes, etc.

5. CLEAR LINE. The Clear line will provide the Collector with a clearing signal consisting of a negative-going step (-14 volt, unregulated) which will be capable of delivering at least 250 milliamperes of current. An additional line will be provided in order to facilitate a ground return for the clearing signal.

6. PANIC LINE. The Data Collector will provide a Panic pulse (level shift) which will consist of a negative 10 volt step (0 to -10 volt) capable of supplying 15 milliamperes of current. In order to facilitate the above, a relay and a turn-off driver circuit will be added to the Collector package. As Panic occurs, the latching relay is energized thus applying the Panic signal to the Panic line. The Panic signal will be held on until the next Alert signal is received. At that time, the turn-off driver circuit releases the latching relay and thereby removes the signal on the Panic line. If the Panic condition still exists after the Alert signal has released the latching relay, the above sequence will be repeated until such time that the panic condition is no longer in affect.

Power:

1. The inter-unit connections will be made through a fourteen-conductor cable (supplied with the collector package) which will be approximately six feet in length. The connector will be at the Data Converter end of the cable. R.F. filtering for the cable will be contained in the Collector package. The pin numbers of the connector are assigned as follows:

Pin No:

A. Alert Line

B. Readout (Clock) Line

C. Information Line

D. Stop Pulse Line

E. Clear Line

F. Panic Line

H. +14 volts

J. + 7 volts

K. - 7 volts

L. -14 volts

M. System Ground

N. Ground Return for Clear Line

P. ---------

R. ---------